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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,953	03/31/2004	Terry Dietz	1671-0293	8391

7590 01/16/2008  
Maginot, Moore & Beck LLP  
Chase Tower, Suite 3250  
111 Monument Circle  
Indianapolis, IN 46204-5109

EXAMINER
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PHILOGENE, PEDRO

ART UNIT	PAPER NUMBER
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3733

MAIL DATE	DELIVERY MODE
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01/16/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/814,953

Applicant(s)

DIETZ ET AL.

Examiner

Pedro Philogene

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 8-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 8-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 8-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kovacevic (7,179,295) in view of Okada (5,365,799).

With respect to the claims, Kavoccevic et al disclose in a telemetric knee prosthesis adapted to measure forces transmitted across the knee joint, the knee prosthesis having a femoral component, a tibial bearing member in articulating contact with the femoral component, a tibia engaging member and a tibial tray engaged to the tibial bearing member and the tibia engaging member, as best seen in FIG.1, the tibial tray comprising an upper plate having a portion configured for engaging the tibial bearing member; a lower plate having a portion configured for engaging the tibia engaging member; as best seen in FIGS.27-33, the lower plate spaced apart from the upper plate and defining a plurality of cavities opening (430, 432, 433, 434, 436, 438) away from the upper plate, each of the cavities including a diaphragm (440, 442, 443, 434, 436, 438) adapted to flex when subjected to a load normal to the diaphragm, as best seen in the FIGS; a plurality of support post (450) each connected between the upper plate and the diaphragm of a corresponding one of the plurality of cavities, wherein the support posts are circular in cross-section; as set forth in column 2, lines 14-15; and a force sensing element (460) disposed within each of the plurality of

cavities and operable to produce an output signal in response to flexing of the diaphragm, a circuit element (490), as best seen in FIGS, disposed in the central cavity for processing the output signal from the force sensing element in each of the plurality of cavities. The force sensing element including four pairs of radially aligned strain gages, the strain gages of each pair arranged to measure differential strain in a radial direction and includes an outer gage mounted on the diaphragm immediately adjacent the outer wall of the cylindrical cavity; as set forth in column 8, lines 57-67; wherein the circular diaphragm exhibits a micro-strain behavior under load that produces a maximum magnitude at a radial location from the center of the circular diaphragm, as set forth in column 9, lines 1-21; wherein the circular diaphragm exhibits a micro-strain behavior under load that produces a zero-crossing point between the center of the circular diaphragm and the outer wall of the cylindrical cavity, a circuit element disposed in the central cavity for processing the output signal from the force sensing element in each of the plurality of cavities; as best seen in FIG.32; wherein none of the four pairs of radially aligned strain gages is aligned with the wiring channel communicating with the corresponding one of the plurality of cavities; as best seen in FIGS.29-33.

It is noted that the above combination of references did not teach of support posts having a diameter that is about  $1/3$  the diameter of the corresponding one of the plurality of cavities; as claimed by applicant. However, applicant fails to establish the criticality of that dimension, and the examiner believes that any such dimensions could have been used and the device would have equally as well. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made

to reach that diameter, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

It is noted that Kovacevic did not teach of an inner gage mounted on the diaphragm adjacent the center of the circular diaphragm and that he said inner gage is positioned to span the maximum magnitude radial location; as claimed by applicant. However, in as similar art (sensor configuration), Okada evidences the used of a force sensor configuration with an inner gage mounted on the diaphragm adjacent the center of the circular diaphragm and that the inner gage is positioned to span the maximum magnitude radial location to detect components in respective axial directions of an applied force on the basis of a pattern of charges produced.

Therefore, given the teaching of Okada, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Kovacevic, as taught by Okada, by incorporating the configuration of the sensors of Okada in the device of Kovacevic, to detect components in respective axial directions of an applied force on the basis of a pattern of charges produced.

Kovacevic further discloses an outer gage mounted on the diaphragm immediately adjacent the outer wall of the cylindrical cavity and that the outer gage is positioned between the zero-crossing point and the outer wall; as best seen in FIGS. 18, 19, and as set forth in column 14, lines 45-67, , column 15, lines 1-42. Kovacevic also discloses each of the four pairs of strain gages (D9-D16) is aligned in one radial planes that are at about 45 degrees relative to the sagittal plane, as best seen 18. Kovacevc

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discloses a an inner gage positioned such that at least a portion of the inner gauge is mounted at a location on one side of the diaphragm directly opposite to where a portion of the corresponding one of the plurality of supports posts contacts the other side of the diaphragm; as set forth in column 15, lines17-42.

### ***Response to Amendment***

Applicant's arguments, see Remarks, filed 10/29/07, with respect to the rejection(s) of claim(s) 1, 2, 8-18 under 102 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Okada. Furthermore, Applicant is claiming a plurality of support posts, however, it is not clear whether the posts are the no load post (65), as stated in applicant's remarks, or the support posts (52) as set forth in the specification.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

3,456,226	Vick	7-1969
5,780,749	Okada	7-1998

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pedro Philogene whose telephone number is (571) 272-4716. The examiner can normally be reached on Monday to Friday 6:30 AM to 4:00 PM.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo Robert can be reached on (571) 272 - 4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Pedro Philogene  
January 9, 2008

  
PEDRO PHILOGENE  
PRINCIPAL EXAMINER